



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
[www.uspto.gov](http://www.uspto.gov)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/881,784	06/18/2001	Hiroshi Itoh	010746	1612
38834	7590	09/21/2005	EXAMINER	
WESTERMAN, HATTORI, DANIELS & ADRIAN, LLP 1250 CONNECTICUT AVENUE, NW SUITE 700 WASHINGTON, DC 20036			BRINICH, STEPHEN M	
			ART UNIT	PAPER NUMBER
			2624	

DATE MAILED: 09/21/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>
	09/881,784	ITOH, HIROSHI
	<b>Examiner</b>	<b>Art Unit</b>
	Stephen M. Brinich	2624

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) Responsive to communication(s) filed on 30 June 2005.
- 2a) This action is **FINAL**.                            2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) Claim(s) 7 and 8 is/are allowed.
- 6) Claim(s) 1,2 and 9-12 is/are rejected.
- 7) Claim(s) 3-6 is/are objected to.
- 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on \_\_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) All    b) Some \* c) None of:
  1. Certified copies of the priority documents have been received.
  2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- 1) Notice of References Cited (PTO-892)
- 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.
- 4) Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) Notice of Informal Patent Application (PTO-152)
- 6) Other: \_\_\_\_\_.

**DETAILED ACTION**

***Claim Rejections - 35 USC § 102***

1. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.
2. Claims 1-2 & 9-12 are rejected under 35 U.S.C. 102(e) as being anticipated by Takayama et al.

Re claims 1-2 & 11, Takayama et al discloses (column 3, lines 1-28; column 17, line 51 - column 18, line 20) a color image processing arrangement in which pixels are provided with a plurality of respective color filters (R, G, B). Defective pixels are detected by correlating a target pixel value with the values of nearby pixels having the same color filter as the target pixel, and then pixel signals corresponding to the detected defective pixels are corrected.

Re claims 9-10 & 12, the nearby pixels are described as "surrounding" the pixel to be tested for defects (column 18, line 2). Thus, the correlation between the pixel to be tested and the surrounding pixels includes correlation in both horizontal and vertical directions.

***Allowable Subject Matter***

3. Claims 3-6 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in

Art Unit: 2624

independent form including all of the limitations of the base claim and any intervening claims.

4. Claims 7-8 are allowed.

5. The following is a statement of reasons for the indication of allowable subject matter:

Re claims 3-4 & 7 (and dependent claims 4-5 & 8), the art of record does not teach or suggest the recited operations upon sets of non-identical filter colored pixels in conjunction with the recited detection and correction of defective pixels via correlating a target pixel value with the values of adjacent pixels having the same color filter as the target pixel.

Re claim 6, the art of record does not teach or suggest the recited processing of predetermined color image signals via a line memory in conjunction with the recited use of the line memory for detection and correction of defective pixels via correlating a target pixel value with the values of adjacent pixels having the same color filter as the target pixel.

***Response to Arguments***

6. Applicant's arguments, see Response filed 6/30/05, with respect to claims 3-6 have been fully considered and are persuasive. The rejection of claims 3-6 under 35 USC §112 has been withdrawn.

Applicant argues (6/30/05 Response: page 9, line 13 - page 11, line 3) that the Takayama et al arrangement of comparing a target pixel value with the mean value of nearby pixels having the same color filter does not teach or suggest the claimed "detecting fault pixels by establishing a correlation among pixel signals along an arrangement of consecutive ones of identical color". Specifically, Applicant notes (6/30/05 Response: page 9, line 13 - page 10, line 1 and page 10, lines 10-15) that the pixels having a given color in Takayama et al are non-consecutively disposed and that the detection system of the invention is based on the degree of correlation between a given pixel and the pixels before and after in the arrangement.

Re the former point, Examiner agrees that Takayama et al describes a color filter in which pixels having a given color are separated from the nearest pixels of the same color (e.g. Figures 2-3 of Takayama et al). However, the claim recitations of "consecutive ones [pixels] of identical color" (claim 1, line 6), "spatially consecutive filter devices of identical color" (claim 2, line 3) and the like are readable upon a consecutive set selected from those pixels, even though those pixels are non-consecutive within the larger set of pixels of all colors. (For example, the five "A" pixels of the top row of Takayama et al Figure 3 would be readable as "consecutive ones [pixels] of

Art Unit: 2624

identical color", but a set consisting of only the first two and the last two, skipping the middle one, would not.)

Re the latter point, the claim recitations of "correlation among pixel signals" (claim 1, line 5), "correlating pixel signals" (claim 2, line 2), and the like do not specify that a single specific pixel is correlated to another single specific pixel. Thus, this recitation is readable on the comparison of a target pixel to a mean value of surrounding pixels within the described set of pixels (e.g. "consecutive ones [pixels] of identical color") as described in Takayama et al.

**Conclusion**

7. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any

Art Unit: 2624

extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

8. Any inquiry concerning the contents of this communication or earlier communications from the examiner should be directed to Stephen M. Brinich at 571-272-7430.

Any inquiry relating to the status of this application or proceeding or any inquiry of a general nature concerning application processing should be directed to the Tech Center 2600 Customer Service center at 571-272-2600 or to the USPTO Contact Center at 800-786-9199 or 703-308-4357.

The examiner can normally be reached on weekdays 7:00-4:30, alternate Fridays off.

If attempts to contact the examiner and the Customer Service Center are unsuccessful, supervisor David Moore can be contacted at 571-272-7437.

Faxes pertaining to this application should be directed to the Tech Center 2600 official fax number, which is 571-273-8300 (as of July 15, 2005).

Art Unit: 2624

Hand-carried correspondence may be delivered to the Customer Service Window, located at the Randolph Building, 401 Dulany Street, Alexandria, VA 22314.

Stephen M Brinich  
Examiner  
Art Unit 2624

smb *smb*  
September 8, 2005



THOMAS D  
TONY LEE  
PRIMARY EXAMINER